

Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 7

### REMARKS

Applicants submit this Response in response to the final Official Action dated October 14, 2005 (the "Official Action"). In this Response, Applicants have amended Claims 1, 4, 6, 9, 11, 15, 16 and 19. No new matter has been added and, as explained in detail below, no new issues are raised by the claim amendments.

In the Official Action, the Examiner objects to the amendment of Claims 1, 4, 6, 9, 11, 14, 16 and 19 that were introduced in a prior Response dated July 22, 2005. In particular, the Examiner contends that the recitations added to independent Claims 1, 6, 11 and 16 relating to the host resolution device being adapted to determine the addresses of devices on the network when the address does not match the entry in the host table and then supplementing the host table with any additional addresses constitutes new matter. The addition of the host resolution device to Claims 1, 4, 6, 9, 11, 14, 16 and 19 was then apparently not considered during the subsequent examination of the claims with the independent claims, instead, again being examined in their original, unamended form.

Independent Claims 1, 6, 11 and 16 have now been amended to more explicitly incorporate the same language as utilized by the specification so as to more clearly demonstrate that the claim amendments do not incorporate new matter. For example, independent Claim 1 has been amended to recite that the apparatus includes "a host resolution device adapted to issue a request to the network to resolve the address when the address does not match an entry in the host table and to supplement the host table with the address upon the receipt of a reply to the request that indicates that the address is valid". Support for this recitation is provided by, among other sources, Figure 9 and paragraphs 105 and 106 of the present application which begin by stating "[i]f, in S903B the IP address is not found in the cache, an ARP request is issued, in S905A, to the protected LAN requesting an explicit resolution of the decoded address. If, in S905B, an ARP reply is received, then the address is deemed valid, and the internal cache is updated with this address, shown in S906."

The other independent claims, that is, independent Claims 6, 11 and 16, have been amended in a comparable fashion so as to include similar recitations that are also supported at least by Figure 9 and paragraphs 105 and 106 of the present application. Moreover, dependent

Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 8

Claims 4, 9, 14 and 19 have been amended to include the same recitations as those set forth by the original set of claims with dependent Claim 4 being only slightly amended relative to original Claim 4 to take into account the prior recitation of the host resolution device by amended independent Claim 1.

As each of Claims 1, 4, 6, 9, 11, 14, 16 and 19 are disclosed by the application, as originally filed, the claim amendments do not introduce new matter. Moreover, the amendments to independent Claims 1, 6, 11 and 16 more particularly define operations of the host resolution device in response to receipt of an address that does not match an entry in the host table relative to the claim amendments submitted in the prior Response dated July 22, 2005. Thus, Applicants submit that the current claim amendments do not raise new issues and should therefore be substantively considered at this juncture.

In the Official Action, the Examiner has also (1) rejected Claims 1-24 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,798,706 to Jeffrey A. Kraemer, et al. (the "Kraemer '706 patent"), (2) rejected Claims 1-3, 5-8, 10-13, 15-18 and 20-24 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,701,432 to Feng Deng, et al. (the "Deng '432 patent"), and (3) rejected Claims 4, 9, 14 and 19 under 35 U.S.C. §103(a) as being unpatentable over the Deng '432 patent in view of the Kraemer '706 patent. Applicants respectfully request reconsideration of the present application and allowance of the claims based on the following.<sup>1</sup>

At the outset, it is noted that the current rejections are substantially similar, if not identical, to the rejections set forth by the prior Official Action dated March 22, 2005, since the Examiner apparently did not take into consideration the amendments to independent Claims 1, 6, 11 and 16 introduced by the prior Response dated July 22, 2005 in formulating the current rejections under 35 U.S.C. §§102(b) and 103(a). Moreover, the Examiner has taken the lack of a specific argument to each individual rejection set forth in the prior Official Action dated March 22, 2005 (and carried over herein) to be a sign of Applicants' agreement with those rejections.

<sup>1</sup> As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Official Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such in the future.

Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 9

Applicants completely disagree with the Examiner's assumption, however, and submit that the Examiner should not consider Applicants to agree with any of the rejections raised by either the prior Official Action dated March 22, 2005 or the present Official Action. Instead, in response to the prior Official Action dated March 22, 2005, each independent claim was amended, and the amended set of claims were then distinguished from the cited references based, at least in part, upon the recitations that had been added to the independent claims. Since the independent claims had been amended and were not taught or suggested by the cited references, at least for those reasons set forth by the prior Response dated July 22, 2005, the original grounds of rejections set forth by the Official Action dated March 22, 2005, relative to the original, unamended claims were no longer applicable and did not need to be individually addressed.

As indicated in footnote 1 above, the Response dated July 22, 2005 also explicitly indicated in footnote 1 on page 8 that "[a]s Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action...is not a concession by Applicants that such assertions are accurate, and Applicants reserve the right to analyze and dispute such in the future." Thus, not only did Applicants not need to respond to each individual assertion raised by the prior Official Action dated March 22, 2005, but Applicants explicitly indicated in the prior Response dated July 22, 2005 that their silence was not any type of concession and specifically reserved the right to further dispute the Examiner's assertions. Thus, the Examiner should not consider any assertion raised by the prior Official Action dated March 22, 2005 or the current Official Action to have been conceded.

With respect to the current set of claims, independent Claim 1 recites an apparatus for detecting adversarial activity on a network that includes:

- a memory adapted to store a host table;
- a key exchanger adapted to derive a cipher key
- a translator adapted to translate predetermined portions of packet header information of a data packet according to a cipher algorithm keyed by the cipher key, wherein the predetermined portions include an address;
- a mapping device adapted to map the address to the host table;
- a host resolution device adapted to issue a request to the network to resolve the address when the address does not match an entry in the host table and

Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 10

to supplement the host table with the address upon receipt of a reply to the request that indicates that the address is valid; and  
an actuator adapted to trigger a security device when the address does not match an entry in the host table.

Neither of the cited references, taken either individually or in combination, teaches or suggests the apparatus of amended independent Claim 1. In this regard, the Kraemer '706 patent describes a network configuration designed to detect back door communication between a work station on the network and device outside of the network. As an example, this back door communication could be conducted via a modem associated with a work station that connects to a device outside of the network in a manner that is independent of the gateway through which communications with devices outside of the network are intended to flow. According to the Kraemer '706 patent, a packet scanner is connected to the network, such as a local area network, and compares the source and destination addresses of packets transmitted over the network to addresses in two different tables. A first table includes the addresses of the devices on the network, while the second table identifies the hardware addresses of the gateways authorized to be connected to the network. See column 3, line 46-59 of the Kraemer '706 patent.

If the source and destination addresses are not included in the tables, the Kraemer '706 patent describes various event routines being performed, which may include logging of information relating to the destination and source devices, the content of the packet at the time at which the event occurred, and the like. Although the Kraemer '706 patent does describe logging situations in which the source and destination addresses are not included in a table, the Kraemer '706 patent does not teach or suggest issuing a request to the network to resolve the address in response to detecting a source address or a destination address that does not match an entry in one of the tables and thereafter supplementing one of the tables with the address upon receipt of a reply to the request that indicates that the address is valid, as now recited by amended independent Claim 1. Indeed, the Kraemer '706 patent does not teach or suggest that the tables should be updated, revised or otherwise modified in instances in which the source and destination addresses are not included within the tables.

Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 11

The Kraemer '706 patent does discuss the dynamic construction of a table of the hardware addresses of the authorized gateways connected to the network by use of an ARP protocol. See column 4, lines 48-52 of the Kraemer '706 patent. Moreover, the Kraemer '706 patent discusses a reverse ARP server that includes a table to permit hardware network addresses to be automatically translated to IP addresses. See column 4, lines 39-44 of the Kraemer '706 patent. Even though the Kraemer '706 patent generally discusses ARP techniques, the Kraemer '706 patent fails to teach or suggest issuing a request to the network, be it an ARP request or otherwise, to resolve an address when the address does not match an entry in the host table, as recited by amended independent Claim 1. Indeed, the dynamic construction of a table using an ARP protocol is not described by the Kraemer '706 patent to be performed at any particular time or in response to any particular action. Additionally, the Kraemer '706 patent fails to teach or suggest supplementing the host table with the address upon receiving a reply to the request that indicates that the address is valid, as now also recited by independent Claim 1. Instead, the Kraemer '706 patent describes the dynamic construction of a table using an ARP protocol, but does not teach or suggest any supplementation of the host table as in the claimed invention.

The Deng '432 patent also fails to teach or suggest the apparatus of amended independent Claim 1. The Deng '432 patent includes a gateway for screening packets transferred over a network. The gateway is described to include a firewall engine and a memory that are coupled not only by a memory bus, but also by a local bus to thereby facilitate enhanced communication between the firewall engine and the memory. The firewall engine examines incoming packets and, in particular, the address of the incoming packets so as to screen the incoming packets in accordance with one or more rule sets. While the firewall engine of the Deng '432 patent may detect an incoming packet having an address that does not match an anticipated address as defined by a respective rule set and may therefore prevent the packet from entering the network protected by the gateway, the Deng '432 patent does not teach or suggest responding to the identification of a packet having an address that does not match the address(es) defined by a respective rule set by issuing a request to the network to resolve the address and then supplementing the addresses included within the rule set with the address if a reply to the request

Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 12

is received that indicates that the address is valid, as now recited by amended independent Claim 1.

Since neither of the cited references teaches or suggests at least a host resolution device as recited by amended independent Claim 1, any combination of these references likewise fails to teach or suggest a host resolution device. Thus, the rejections of amended independent Claim 1 are overcome, and Applicants respectfully request withdrawal of the rejections of Claim 1.

Independent Claim 6 recites a method for detecting adversarial activity on a network that includes:

- storing a host table;
- deriving a cipher key;
- translating predetermined portions of packet header information of a data packet according to a cipher algorithm keyed by the cipher key, wherein the predetermined portions include an address;
- mapping the address to the host table;
- issuing a request to the network to resolve the address when the address does not match an entry in the host table and supplementing the host table with the address upon receipt of a reply to the request that indicates that the address is valid; and
- triggering a security device when the address does not match an entry in the host table.

Likewise, independent Claim 11 recites a device for detecting adversarial activity on a network and includes various means for performing the method of Claim 6, and independent Claim 16 recites a bastion host adapted for processing packet header information of the data packet and operable to perform the method of Claim 6.

For similar reasons to those described above in conjunction with amended independent Claim 1, amended independent Claims 6, 11 and 16 are also not taught or suggested by the Kraemer '706 patent and the Deng '432 patent, taken either individually or in combination. Thus, the rejections of amended independent Claims 6, 11 and 16 are also overcome, and Applicants respectfully request that the rejections of Claims 6, 11 and 16 be withdrawn.

Claims 2-5, 7-10, 12-15 and 17-24, which depend from independent Claims 1, 6, 11 and 16, are also patentably distinct from the cited references, taken either individually or in combination, for at least the same reasons as described above in conjunction with their respective

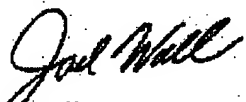
Appl. No.: 09/928,133  
Amdt. dated 12/27/2005  
Reply to Office action of October 14, 2005  
Page 13

base independent claims.<sup>2</sup> As such, the rejections of the dependent claims are therefore also correspondingly overcome, and Applicants respectfully request that the rejections of dependent Claims 2-5, 7-10, 12-15 and 17-24 be withdrawn.

In view of the foregoing, it is respectfully submitted that all of the claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 07-2347.

Respectfully submitted,

  
Joel Wall  
Registration No. 25,648

**Customer No. 32127**  
Verizon Corporate Services Group, Inc.  
c/o Christian R. Andersen  
600 Hiddenridge, HQE03H14  
Irvin, Texas 75038  
Telephone: (972) 718-4800  
Facsimile: (972) 718-3946

<sup>2</sup> As Applicants' remarks with respect to the base independent claims are sufficient to overcome the Examiner's rejection of all claims dependent therefrom, Applicants' silence as to the Examiner's assertions with respect to the dependent claims is not a concession by Applicants to the Examiner's assertions as to these claims, and Applicants reserve the right to analyze and dispute such assertions in the future.